## k-Nearest Neighbors

## **Problem**

Build a k-Nearest Neighbors classifier.

For each <u>dataset</u> find the optimal combination of parameters for kNN according to the F-score calculated by LOO-CV.

As parameters you should use:

- **h** the width of Parzen window
- **k** the number of considered neighbors (if **h** is not fixed)
- Distance function
- Kernel function

For the found combination of a distance and kernel function plot F-score dependence on  $\boldsymbol{h}$  and  $\boldsymbol{k}$ .